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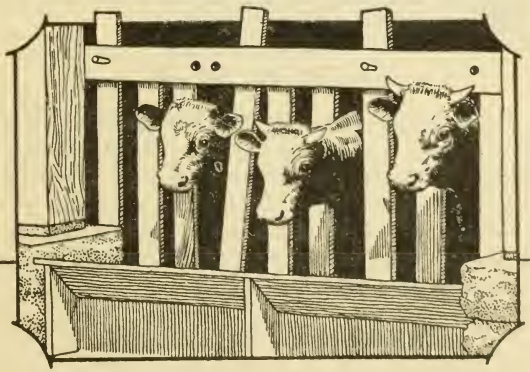

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CARE OF THE DAIRY CALF

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The dairy calf must have good feed and care in order to grow and to develop properly. A calf that gets a good start during the first six months has a better chance of developing into a large-size animal capable of giving a good account of itself when mature than one getting a poor start during this time.

Care of the Newborn Calf

The calf should be born in a clean, disinfected, well-bedded box stall. Immediately after arrival it must be given attention. Sometimes a slimy membrane covers its nose. Remove this so that it can breathe more easily. Usually the cow will start to dry the calf at once by licking it vigorously. If she does not do this, dry it with burlap, straw, or some other suitable material. Shortly after birth the calf is able to stand and within a half hour it will be nursing. Sometimes the calf is so weak that it is necessary to hold it to the cow's udder in order that it may nurse. Give the calf the first milk, known as colostrum, which is very beneficial in cleaning out its system and in aiding the organs to start functioning properly. To guard against infection apply tincture of iodine to the calf's navel soon after birth.

Leave the calf with its mother 24 to 48 hours if she is progressing normally. This will enable it to get small quantities of its mother's milk at the proper temperature as often as it is needed. When this period has elapsed remove the calf, because a calf which has been left with its mother too long is harder to teach to drink than one removed soon after birth.

Quarters for the Calf

When the calf is taken from its mother place it in an individual pen to prevent sucking and navel injury. This pen should be clean, light, well bedded with dry material, and free from drafts. When the calf is 3 or 4 weeks of age, place it in a larger pen with other calves of the same age. Provide a lot or small pasture; and when the weather is not too cold or stormy, turn the calf out so that it will get plenty of exercise and direct sunlight.

Teaching the Calf to Drink

A calf that has been kept without feed for at least 12 hours can usually be taught to drink quite readily. Give it fresh, warm milk from its mother and feed this from a clean pail. Back the calf into a corner, straddle it, and place the pail of milk in front of it. (Fig. 1.) Dip two fingers into the milk and place them in the calf's mouth. When it starts to suck the fingers, draw its nose down into

the bucket of milk. Spread the two fingers apart a little way so that the milk will be drawn up into its mouth between the fingers as the calf sucks. After it gets several swallows of milk remove the fingers slowly. Repeat this operation as often as necessary. Many calves taught by this method will drink at the first feeding.

Cleanliness the First Essential

Cleanliness is absolutely essential in the successful raising of calves. This is equally true of the feed, pen, bedding, and pails or utensils. All milk and other feeds should be fresh and clean. Keep the calf pens clean and well bedded with dry material. Thoroughly wash and scald or sterilize milk pails after each feeding. Remove discarded feed from the feed boxes each day. Attention to these details is the best preventive of disease. Many small disturbances of the calf's stomach and digestive system which hinder growth and development are caused by bacteria due to unclean conditions.

FIG. 1.—Teaching the calf to drink

When separated milk from a creamery is fed it should always be Pasteurized, because it is practically impossible to know that such milk is free from organisms that cause disease.

Feeding During First Two Weeks

During the first two weeks give the calf whole milk, preferably from its mother. Feed this milk three times daily, and at an even temperature of about 98° F. If the milk tests over 4 per cent butterfat dilute it with skim milk or water, because milk that is too rich is apt to give the calf indigestion and scours. Use a pair of milk scales to weigh the milk at each feeding. (Fig. 2.) Feed too little rather than too much. Six to nine pounds of milk daily for the first week, divided equally into three feedings, is sufficient for the average-size calf. During the second week, increase this amount by 3 pounds a day if the calf is doing well.

Changing and Increasing the Feed

A few calves are raised on whole milk, but it is usually too valuable to feed. Calves do nearly as well on skim milk, and most calves are raised on this feed. If fresh skim milk is not available, dried or powdered skim milk may be fed instead, or the calf may be raised on calf-meal gruels. Feed hay and grain at an early age to supplement these feeds.

FIG. 2.—Weighing the milk for the calf

Raising the Calf on Skim Milk

If the calf is doing well, gradually substitute skim milk for whole milk when the animal is 2 to 3 weeks old. Take at least 10 days to make the change, substituting skim milk for whole milk at the rate of about 1 pound a day. Do not increase the total amount of milk fed while this change is being made. If the manure becomes liquid or pasty, a condition commonly known as diarrhea or scours, the milk is not being properly digested. Delay any further substitution of skim milk for whole milk until this condition disappears. Take care to remove all foam from the skim milk, as this sometimes causes digestive trouble and bloating.

Calves weighing from 50 to 75 pounds require about 10 pounds of skim milk daily at 4 to 5 weeks of age, and calves weighing from 75 to 100 pounds require about 14 pounds daily. Increase this amount 2 pounds every 2 weeks until the calf is receiving 16 to 20 pounds daily or even more. If available, feed skim milk until it is 6 months old. Skim milk may be given to advantage up to 8 to 10 months of age.

Feeding Hay, Grain, and Silage

At the beginning of the third week the calf should be provided with small amounts of both hay and grain. Feed the most palatable hay on hand. Clean, bright, clover, alfalfa, or mixed hay is best.

Do not feed a very young calf alfalfa hay that is too leafy as this is apt to cause scours. Feed hay sparingly at first and increase the amount gradually as the calf gets accustomed to it. Place a rack where the calf can reach the hay but can not soil it. Put only as much hay in this rack as the calf will clean up in one day.

The grain mixture should be palatable, have a good effect on the digestive system, and supply the food materials which the calf requires. Home-grown grains, such as corn and oats, and purchased feeds, such as wheat bran and linseed meal, are good calf feeds. The following mixtures are recommended:

(1) Three parts, by weight, of cracked corn and one part wheat bran.
(2) Three parts, by weight, of cracked corn, one part wheat bran, and one part ground oats.
(3) Three parts, by weight, of cracked corn, one part wheat bran, one part ground oats, and one part linseed meal.
(4) Five parts, by weight, of cracked corn, one part wheat bran, one part ground oats, and one part blood meal.
(5) Oats, ground.

A calf 3 weeks old will eat only a handful or two of grain daily. Increase this amount gradually until the calf gets about one-half pound daily at 4 weeks of age, 1 pound at 6 weeks, 1½ pounds at 8 weeks, and 2 pounds at 10 weeks to 3 months of age. Three or more pounds per day may be fed a little later if the calf is not gaining satisfactorily on a smaller amount.

Silage is not a satisfactory feed for the young calf but may be included in the ration after it reaches 3 months of age. Limit the amount fed, because it is too laxative when fed in liberal amounts. Two pounds daily is enough for the 3-month-old calf. Gradually increase this amount at the rate of 1 pound daily for each month's increase in the calf's age. Never feed moldy silage because it is apt to cause indigestion and poisoning.

Raising the Calf on Dry Skim Milk

Dry skim milk, when fresh and wholesome and when properly mixed with water to the approximate composition of skim milk, makes a good substitute for fresh skim milk.

Mix 1 part of dried milk with 9 parts of warm water and feed the same as skim milk. In preparing it for feeding, mix the dried milk with an equal quantity of warm water, stir thoroughly until of a smooth consistency, and then add the rest of the water. Take care to mix this feed in the same proportion from day to day and feed at a temperature of about 100° F. Gradually change the calf to this feed from whole milk in the same way as it is changed from whole milk to skim milk.

Raising the Calf on Calf-Meal Gruels

If skim milk is scarce, whole milk may be gradually replaced by calf-meal gruels. Although this method of feeding is not quite so satisfactory as the feeding of skim milk, fairly good results will be obtained if a good calf meal is selected and properly fed.

There are several ready-mixed calf meals on the market. Satisfactory calf meals may also be mixed at home, provided the necessary ingredients can be obtained.

Beltsville Calf Meal

The following mixture has been devised as the result of experience at the experimental farm of the Bureau of Dairy Industry at Beltsville, Md.:

Fifty parts, by weight, of finely ground corn, 15 parts linseed meal, 15 parts finely ground rolled oats, 10 parts dried blood flour, 10 parts dry skim milk, and one half part salt.

To prepare it for feeding, mix to a smooth consistency with an equal weight of cold water. Then add 8 pounds of warm or boiling water for each pound of dry calf meal used. Stir thoroughly until well mixed and allow it to stand for several hours. Warm to 100° F. before feeding. Mix only enough at one time for one or two feedings. Keep all utensils used in a clean and sanitary condition.

The best results from feeding calf-meal gruel are obtained by substituting it very gradually for whole milk after the calf is 4 weeks old. Take at least four weeks to complete the change from milk to gruel.

The week before gruel feeding is commenced a tablespoonful of the dry calf meal placed in the milk at each feeding will accustom the calf to the flavor of the meal. Feed the calf one-fifth gruel and four-fifths milk at 5 weeks of age; at 6 weeks, two-fifths gruel and three-fifths milk; at 7 weeks, three-fifths gruel and two-fifths milk; at 8 weeks, four-fifths gruel and one-fifth milk; and at 9 weeks, all gruel. As the calf advances in age increase the total amount of milk and gruel fed in the same way as when milk alone is fed. Continue gruel feeding until the calf is 4 to 6 months of age. If it gets indigestion and scours at any time during the change from milk to gruel cut down the amount of gruel temporarily until this condition disappears. In persistent cases, place the calf on a milk diet for a temporary period.

Hay and grain feeding with calf-meal gruels is the same as with skim milk. In order that the calf may get the minerals which are necessary for growth and which are usually furnished by milk feeding, feed a moderate amount of good-quality, fine-stemmed alfalfa, clover, or other legume hay.

Water and Salt

Even though a calf drinks milk, it needs water when 2 or 3 weeks of age. Provide plenty of fresh, clean water so that the calf may drink whenever it desires. When the calf is old enough to eat roughage allow it to have access to salt also.

Stanchions for Calves

When several calves are kept together in a large pen, it is difficult to feed them by hand unless they are tied. Special steel stanchions may be purchased, or simple wooden stanchions may be made at home. Figure 3 shows homemade wooden stanchions [1] and feed mangers and Figure 4 shows metal stanchions and feed mangers in use.

[1] Plans for making such stanchions may be obtained by writing to the Bureau of Dairy Industry, U. S. Department of Agriculture, Washington, D. C.

Prevention of Horns

The development of horns can be prevented by the use of caustic soda or caustic potash when the calf is from 4 to 10 days old. At this age the undeveloped horn or button is only loosely attached to the skull and appears more as a part of the skin.

Clip the hair off over and around the horns. Apply vaseline liberally across the head, above the eyes, and over the temples and ears to prevent severe burns. Wrap the stick of caustic in paper with one end exposed. Slightly moisten the exposed end with water and rub on each horn alternately, making a raw spot about the size of a nickel or 25-cent piece. Do not continue the rubbing until these spots bleed. In applying the caustic take care that it does not run down the calf's head, and keep the calf under shelter if there is any likelihood of rain.

FIG. 3.—Homemade calf stanchions and feed mangers

Marking Calves for Identification

It is important, especially in purebred herds, that each calf be marked plainly to permit easy identification. This is best accomplished by means of metal or composition ear tags or by tattooing the ears. Breeding and calving records, photographs, and diagrams of color markings are also helpful.

Scours from Indigestion

Diarrhea, or scours, probably the most common disease of calves, is a result of digestive disturbances. It may be caused by irregular feeding, overfeeding, sudden change of feed, fermented feeds, feeding dirty milk or milk from diseased cows, use of dirty milk pails or feed boxes, and damp, dirty stables. As soon as a case of scours is discovered, separate the affected calf from the others and clean and disinfect the pen. Reduce its feed immediately by at least one-half, and give a dose of 1 to 2 ounces of castor oil, depending upon the size of the calf. If one dose is not sufficient, give another dose in a day or two.

White Scours

White scours, or infectious dysentery, generally affects a number of calves in a lot and first appears shortly after birth with light-colored, offensive droppings. A calf affected with this disease wants to sleep all the time, can not be induced to suck or drink, becomes very much weakened, and usually dies within three or four days. There is no specific method of curing the disease.

To lessen the danger of this disease, sanitary precautions should be taken. Clean and disinfect the pen and apply tincture of iodine to the navel cord of the calf immediately after birth. If the disease

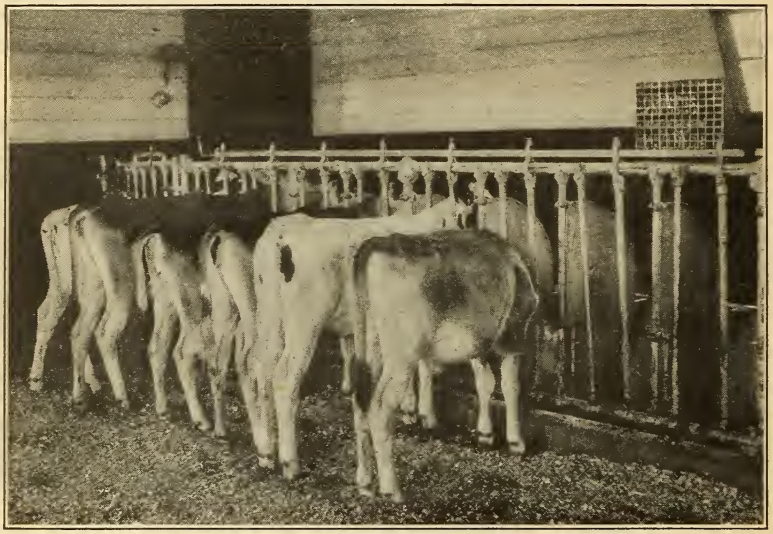

FIG. 4.—Metal stanchions and feed mangers in use

occurs consult a competent veterinarian; otherwise a season's crop of calves may be lost.

Lice

Lice are very irritating, give the calves a rough, unthrifty appearance, and prevent them from gaining as they should. Calves are not apt to become infested with lice if they are kept away from older animals that are infested and if they are placed in quarters that are kept clean and disinfected at regular intervals.[2]

[2] Instructions for treating calves for lice are given in Farmers' Bulletin 909, "Cattle Lice and How to Eradicate Them."

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